

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**UM 1535**

<b>In the Matter of</b>	)	<b>COMMENTS AND</b>
	)	<b>SUPPLEMENTAL COMMENTS</b>
<b>PORTLAND GENERAL ELECTRIC</b>	)	<b>OF CALPINE CORPORATION</b>
<b>COMPANY</b>	)	
	)	
<b>Request for Proposals for Capacity</b>	)	
<b>Resources</b>	)	

Calpine Corporation submits as its comments in this proceeding the original comments and the supplemental comments that Calpine Corporation filed *in In the Matter of Troutdale Energy Center, LLC, Petition for Declaratory Ruling, DR-46*. Copies are attached.

DATED this 29<sup>th</sup> day of August, 2013.

ESLER, STEPHENS & BUCKLEY, LLP

By:           /s/ John W. Stephens            
John W. Stephens, OSB No. 773583  
Of Attorneys for Calpine Corporation

**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**DR 46**

<b>In the Matter of</b>	)	<b>COMMENTS OF CALPINE</b>
	)	<b>CORPORATION</b>
<b>TROUTDALE ENERGY CENTER, LLC</b>	)	
	)	<b>REQUEST FOR</b>
<b>Petition for Declaratory Ruling</b>	)	<b>INVESTIGATION</b>

**I. INTRODUCTION**

Calpine Corporation owns and operates 29,000 MW nationwide of reliable, efficient, and environmentally-responsible generation, 7,900 MW of which is in the western United States, including the Hermiston Power Plant (HPP) in Oregon. The HPP is a 617 MW natural gas-fired combined cycle gas turbine facility. HPP uses two combustion turbines, each with its own heat recovery steam generator, and supplies steam to a single steam turbine generator. HPP went online in 2002.

Calpine submitted two proposals in response to that part of Portland General Electric Co.'s 2012 Capacity and Energy Power Supply Resources RFP seeking proposals for up to 500 MW of baseload energy. Calpine was informed by PGE that each of its proposals was on the initial short list and the final short list. Thereafter, Calpine had no negotiations with PGE. In fact, Calpine has essentially had no further contact with PGE.

According to the Closing Report submitted by the IE on January 30, 2013, PGE received 14 Purchase Power Agreement bids, one Engineering Procurement Construction (EPC) bid at the Carty site, and two Asset Purchase Agreement Bids at other sites for the energy solicitation. The RFP required any bid for a third party to build on the Carty site to be an EPC bid. Closing Report of the Independent Evaluator, at 5, 33, 35.

On June 3, 2013, PGE announced that it had entered into an agreement for the construction of a new 440 MW natural gas-fired CCGT power plant at the Carty site to meet the base load energy requirements outlined in the RFP for energy and capacity resources. The new facility is to be built by an affiliate of Abengoa S.A., of Spain. The new facility will be owned and operated by PGE. The facility is scheduled to be in service in 2016 and the estimated total cost of the project is \$440 million to \$455 million, excluding allowance for funds used during construction (AFUDC). PGE Form 8-K, dated June 3, 2013.

Although not stated in PGE's report, Calpine understands that the agreement with Abengoa is an EPC contract, and is presumably the "one EPC Bid at the Carty site...for the energy solicitation" referred to in the Closing Report of the IE, p. 33. (Jan. 31, 2013). In other words, PGE has chosen what amounts to a self-build option that is not qualitatively different from the self-build Benchmark Resource proposals PGE prepared in connection with the RFP.

Since at least 2006, this Commission has been concerned about the self-build bias—"the bias inherent in the utility resource procurement process that favors utility ownership of generation assets over Power Purchase Agreements (PPAs) with third parties." Order No. 11-001, at 1, 5. The Commission has been attempting to understand and to resolve problems associated with that bias through a number of steps it has taken in the context of Docket No. UM 1182 and elsewhere.

As a bidder, Calpine is not privy to information about the scoring of the proposals, but based upon what Calpine does know about its own proposals and the Abengoa proposal that was selected, it appears to Calpine that PGE may be acquiring a "higher cost, utility-owned resource" instead of entering into an alternative lower cost agreement; and that as a result, in 2016, ratepayers may be harmed if the original cost is included in rate base, or alternatively, some

portion of PGE's investment may be disallowed as imprudent—neither of which is an optimal outcome. Order No. 11-001, at 5.

Calpine understands from Stephanie Andrus's letter dated July 9, 2013 that PUC Staff, at least, may be using the occasion of Troutdale Energy Center's petition as a vehicle for the Commission to consider all the "issues related" to the petition, as opposed to simply the petition itself, that the occasion of the petition provides the opportunity for the Commission to shed light on PGE's selection process and to provide for the airing of the concerns and complaints that different parties have with that process and the outcome of that process.

With that in mind, Calpine is requesting (1) that the Commission open an investigation regarding PGE's selection of the Abengoa proposal; and (2) that the Commission direct PGE to seek "acknowledgement" of its selection of the Abengoa proposal—"acknowledgement" being as that term is used in Bidding Guideline 13, Order No. 06-446, and in Order No. 89-507. ORS 757.515(1)("Whenever the Public Utility Commission believes...that an investigation of any matter relating to any public utility... should be made, ...the commission may on motion summarily investigate any such matter, with or without notice.").

## **II. PRIMARY PURPOSE OF COMPETITIVE BIDDING IS TO AVOID SELF-BUILD BIAS**

In 1989, when the Commission instituted least-cost planning, the Commission introduced the idea that genuine competitive bidding could play a key role in securing for ratepayers adequate and safe service at reasonable and just rates (ORS 757.020). The Commission said:

Competitive Bidding. The Commission believes that competitive bidding may play an important role in LCP. A utility's least-cost plan must consider the role of competitive bidding in planning for and acquiring new resources. Each utility should identify in its plan how and to what extent competitive bidding may be employed in its acquisition of resources.

*Re Least-cost Planning for Resource Acquisitions, UM 180, Order No. 89-507.*

Right away, when the Commission adopted its first rules on competitive bidding, the Commission recognized the self-build bias problem and attempted to deal with it, in part, by prohibiting utilities from bidding on their own RFPs. *Re Competitive Bidding by Investor-Owned Electric Utility Companies*, UM 316, Order No. 91-1383. PUC Staff and ODOE were concerned that “a utility affiliate’s participation in the utility’s own RFP could damage the perceived credibility and fairness of the bidding process (e.g., self-dealing) and contravene basic utility ratemaking policy.” Accordingly, the Commission determined that a “soliciting utility or its affiliate...may not submit bids in response to the utility’s own bid solicitation.”

In 2006, when the Commission revised the competitive bidding rules in *Investigation Regarding Competitive Bidding*, UM 1182, the Commission provided in Bidding Guideline 5 that a utility could use a self-build option in an RFP (to be known as a Benchmark Resource) (Order No. 06-446), but at the very same time, the Commission opened UM 1276 “to address the bias inherent in the utility resource procurement process that favors utility ownership of generation assets over Power Purchase Agreements (PPAs) with third parties.” *Investigation regarding performance-based ratemaking mechanisms to address potential build- vs.-buy bias*, Order No. 11-001, at 1.

Guideline 13 in Order 06-446 provided that:

*RFP Acknowledgment:* The utility may request that the Commission acknowledge the utility’s selection of the final short-list of RFP resources. The IE will participate in the RFP acknowledgment proceeding. Acknowledgment has the same meaning as assigned to that term in Commission Order No. 89-507. RFP acknowledgment will have the same legal force and effect as IRP acknowledgment in any future cost recovery proceeding. The utility’s request should discuss the consistency of the final short-list with the company’s acknowledged IRP Action Plan.

While Guideline 13 was written in optional terms, everyone expected that electric utilities would come in for acknowledgement of the final short list, and previously that is what other utilities

have done. *E.g. PacifiCorp, Request for Acknowledgement of Final Shortlist of Bidders in the 2008 Request for Proposals*, UM 1360, Order No. 10-494. Guideline 13 was similar to the summary report that had been required by Order 91-1383:

A summary report of the bidding outcome should be compiled by the utility and made available as public information. This report should list characteristics of all winning bids. ... In addition, the report should summarize key points of the losing bids without, however, identifying specific projects. This type of summary information will be useful in evaluating the competitive bidding process and be useful input to the utility's least-cost planning process.

PGE, however, chose not to seek acknowledgement of its final short list. If PGE had done so, it would have provided information to the Commission, ratepayers, and other interested parties about the process that PGE had followed in selecting its short list and that it was likely to apply in making its final selection. Seeking acknowledgement would have allowed the Commission, ratepayers, and other interested parties to give input that would have been beneficial to everyone concerned, and it would have increased the level of satisfaction with PGE's RFP process.

In Order No. 11-001, in UM 1276, the docket the Commission opened when it issued the competitive bidding guidelines in 2006, the Commission agreed there is a self-build bias:

We too accept the premise that a bias exists in the utility resource procurement process that favors utility-owned resources over PPAs. This bias is really a logical inference drawn from an understanding of ratemaking practices and the effectiveness of incentives. As Staff explained in its opening comments about the lack of a return on PPAs:

[U]nder cost of service regulation, a utility's 'profit' is the opportunity to earn a return on the rate base and by purchasing a PPA in lieu of building a power plant, it is foregoing the potential to earn some amount of profit.

The fact that credit rating entities impute debt equivalency amounts from PPAs to a utility's balance sheet similarly incents the acquisition of utility-owned resources.

*Id.* at 5. The Commission recognized that the incentives arising from the ratemaking practices can motivate utilities to "acquir[e] higher cost, utility-owned resources" instead of entering into

lower cost PPAs, and thereby “inflict” harm on customers. The Commission was unable to assess the risks and the harms, and to further examine those issues and others, the Commission reopened UM 1182. The Commission also noted its general dissatisfaction with the evaluations of Benchmark Resources it had received from IEs, that “the IE’s evaluation of the comparative risks and advantages of utility benchmark resources has not met our expectations.” The Commission said:

We want a more comprehensive accounting and comparison of all of the relevant risks, including consideration of construction risks, operation and performance risks, and environmental regulatory risks. We also want more in-depth analysis of all of these risks. We invite comment on the analytic framework and methodologies that should be used to evaluate and compare resource ownership to purchasing power from an independent power producer.

*Id.* at 6.

Thereafter, the Commission has taken a number of steps to deal with the self-build bias in Order Nos. 11-340, 12-324, 13-204, but the process goes on and the problem remains.

### **III. PGE CHOOSES SELF-BUILD ALTERNATIVE**

After all the work the Commission has undertaken on competitive bidding; after all the efforts the Commission has made to mitigate the self-build bias; and after PGE received 14 PPA bids and two Asset Purchase bids, PGE chose the one EPC bid—the one third-party bid that is tantamount to a self-build. PGE’s failure to negotiate with Calpine (and the other bidders on the short list?) is further evidence that PGE’s choice of the EPC bid was a foregone conclusion

While an EPC proposal is not precisely the same as a (self-build) Benchmark Resource proposal, in terms of all of the concerns the Commission has expressed about the self-build bias, an EPC proposal is identical. Although the terms of the agreement have not been made public, in an EPC proposal, the bidder designs and constructs the power plant for the utility, the same

thing an engineering and construction firm does on a self-build. It is essentially a self-build by another name.

In self-build bias terms, PGE is just as motivated to select an EPC bid as a Benchmark Resource bid. Either way, it is a “utility-owned resource.” The Carty station would go into rate base just like the Benchmark Resource(s) and PGE will have an opportunity to earn a profit, something that would not be available to PGE had it selected one of the 14 PPA bids. Likewise, with an EPC, like any other utility-owned resource, no credit rating entity will impute debt equivalency amounts to a utility’s balance sheet like it might with a PPA. PGE is motivated to select a “higher cost” EPC bid over PPA that would provide lower cost service to ratepayers. See Order No. 11-001, at 5.

It is worth noting that analysts, including rating agencies, who of course are focused on shareholder interests, are positive about PGE’s choice. Since selecting the EPC proposal, Deutsche Bank, Wolfe Research, Goldman Sachs, and Macquarie issued generally positive or more positive reports on PGE.

It is also important to keep in mind that the EPC selection follows PGE’s selection of its Port Westward Unit 2 benchmark proposal for the part of the RFP providing for approximately 200 megawatts of flexible peaking capacity. PGE News Release (Jan. 31, 2013). All the work the Commission, ratepayer groups, and other interested persons went through to establish a fair bidding process has come to naught.

#### **IV. PGE’S SELECTION OF THE EPC BID RAISES SERIOUS QUESTIONS**

At this point, everyone besides PGE (and perhaps the IE and some members of OPUC Staff) are in the dark about how and why PGE made the choice it did. In light of the concerns the Commission has expressed about the self-build bias, PGE’s selection of the one EPC bid raises serious unanswered questions. Just some of those questions include:



**A. QUESTIONS ABOUT THE COST OF THE PROPOSED CARTY GENERATING STATION**

First, Abengoa is based in Seville, Spain. Abengoa's prior energy experience in the United States has been with solar thermal and bioethanol facilities. According to Abengoa's press release, "[t]his project is the first of its kind to be built [by Abengoa] in the United States." Abeinsa press release, dated June 4, 2013 (copy attached). A search for "combined cycle" at Abengoa's website yielded one hit—this "first of its kind project." Given Abengoa's lack of experience, what happens if Abengoa is unable to fulfill the terms of its contract? What track record is there to go on in terms of Abengoa's experience with engineering and design of CCGTs, the quality of its construction of CCGTs, its on-time completion rate with respect to CCGTs, or its experience with cost overruns on CCGTs? Not only does this have potential rate implications for ratepayers, it also has adequacy of service implications as well. ORS 757.020.

Second, parties do not know whether there are any cost guarantees in place.

In *Investigation Regarding Competitive Bidding*, UM 1182, Order No. 13-204, PGE argued that there were "advances in the procurement process that allows the availability of cost guarantees for plant construction from turbine manufacturers and Engineering, Procurement & Construction (EPC) Firms." *Id.* at 5. Are there any such cost guarantees in the EPC contract with Abengoa or the contract with Mitsubishi (turbine manufacturer)? What is the nature of the guarantees? Do they apply to Change Orders? Unforeseen conditions? What if there are regulatory changes during construction that require significant changes to the design of the plant?<sup>1</sup>

Relatedly, what is the credit quality of the provider's guarantee? What do we know about the credit quality or financial backing of this company?

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<sup>1</sup> Although it followed completion of the plant, Trojan turned into a much more expensive facility after plant upgrades were required following Three Mile Island in 1979. The same thing has happened at Boardman with the requirement to install new emissions controls.

Third, it is unclear what the expected cost of the plant is going to be. In PGE's 8K filing, it estimates the cost of the facility is \$440 to \$455 million, excluding AFUDC. (It is not known to other parties how quickly PGE will use funds during the construction phase, but assuming an allowance of 10%, it would appear that AFUDC will, at least, exceed \$50 million. AFUDC will be added to the original cost of the plant and will presumably be included in rate base.<sup>2</sup>) In contrast to PGE's figures, according to Abengoa's press release, the "project is valued at USD 364 million." Abeinsa press release, dated June 4, 2013 (copy attached). Why the \$76 to \$91 million difference from PGE's estimate for the cost of the facility?

Fourth, in Order No. 11-001, the Commission said that at least with respect to the Benchmark Resource(s), it wanted "a more comprehensive accounting and comparison of all of the relevant risks, including consideration of construction risks, operation and performance risks, and environmental regulatory risks," and a "more in-depth analysis of all of these risks." *Id.* at 6. Did that occur here? How did PGE "evaluate and compare resource ownership to purchasing power from an independent power producer"? *Id.*

Fifth, to the extent that at least one of the two Asset Purchase bids was a proposal to sell an existing plant vs. constructing the new Carty station, how was that weighed? In *PacifiCorp Petition for Waiver of the Commission's Competitive Bidding Guidelines*, UM 1374, Order No. 08-376, the Commission (adopting Staff Recommendation) identified a number of advantages of Pacific's acquisition of the existing Chehalis generating plant, not the least of which was, as the IE pointed out, "the Chehalis purchase would lower risk to ratepayers compared with the

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<sup>2</sup> "AFDC [or AFUDC] is a method to capitalize carrying charges incurred during the construction period. These carrying charges are a mix of debt interest and a reasonable equity return. In order to recognize the costs associated with carrying charges during the construction phase, the utility is allowed to accrue interest through AFDC." *Portland General Electric Co.*, UM 1323, Order No. 07-451, Appendix A, at 2.

acquisition of a new-build facility by avoiding the risks inherent in new construction.” *Id.* Appendix A, at 5. The benefits to ratepayers of buying the existing plant were so high, the Commission allowed a waiver of its competitive bidding guidelines.

**B. NEW PLANT WILL BE FRONTLOADED IN RATES**

One effect of constructing and rate basing a new plant, as opposed to entering into a PPA, is that the rate effect on ratepayers is frontloaded. Assuming an original cost of \$455 million, plus a minimum of \$50 million for AFUDC, for the Carty plant, a 35-year life, and a (grossed-up) rate of return of 10.851% (Stipulation UE 262, Ex. A, p. 2), it appears the rate impact in Year 1 would be \$68.4 million, whereas the rate impact in Year 10 would be \$54.4 million; Year 20, \$38.7 million; and Year 30, \$23 million.<sup>3</sup> This frontloading in rates raises important issues of equity between different generations of ratepayers. *Portland General Electric Co. for an Investigation into Least Cost Plan Plant Retirement*, DR 10, UE 88, Order No. 08-487, at 66 (“The Commission must balance customers’ interests over time, known as intergenerational equity.”)

**V. PGE’S CAPITAL PROJECTS WILL HAVE A SIGNIFICANT IMPACT ON RATES; OPENNESS AND PUBLIC PARTICIPATION APPROPRIATE**

Aside from the serious questions about the self-build bias inherent in PGE’s choice of the Abengoa EPC proposal, it is appropriate to have some level of public participation and openness with respect to resource choices. Taken all together, PGE is proposing capital projects totaling \$1.3 billion, and that is without knowing where the negotiations with BPA will lead with respect to acquisition of “ownership” of regional transmission capacity for 440 MW, which presumably will be in the hundreds of millions of dollars. These choices are going to have a significant impact on rates.

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<sup>3</sup> A worksheet showing these calculations is attached.

Ever since Oregon re-established a three-person commission in late 1985, the PUC has been dedicated to “the rule that the public’s business will be conducted in an open forum in which all participants will have an opportunity to offer their views.” *Re Portland General Electric Co.*, UE 47, UE 48, Order No. 87-1017, 86 PUR4th 463 (1987). The Commission dedicated itself to this rule not simply because Oregonians are dedicated to open proceedings and public participation, but also because the Commission recognizes that when “many eyes” examine a complex issue it will lead to a better decision. *See, e.g., Kellas v. Dept. of Corrections*, 341 Or 471, 145 P3d 139 (2006)(noting that in *Marbet v. Portland Gen. Elect.*, 277 Or 447, 453–54, 561 P2d 154 (1977), the court had noted that the “legislature envisioned broad public participation in the energy facility siting process itself”); *cf. New York v. Microsoft Corp.*, 224 F Supp2d 76, 238 (DDC 2002)(“many eyes” leads to better protocol).

While there was openness and public participation in setting up the RFP, there was none with respect to scoring the different proposals, selecting the initial and final short-lists, and selecting the final proposal. While the Independent Evaluator certainly plays an important role in the competitive bidding process, and it is appropriate that the IE will be at the August 6 Public Meeting, an IE is not intended to be and provides no substitute for openness, public participation, or the better decisions that arise from the work of many eyes.

Here, where the public does not know what happened and why, opening an investigation and requiring PGE to seek an acknowledgement of its selection of the Abengoa proposal represent reasonable steps for the Commission to take.

## **VI. CONCLUSION**

PGE’s plans are a major capital event. With a current rate base of approximately \$3 billion, PGE is looking at what amounts to a 50% increase in rate base. This is a once in a

generation capital expenditure, and it is going to have a very significant impact on ratepayers. It is important to everyone to get this right.

It seems after everything the Commission has done with respect to least cost planning, with competitive bidding, and PGE's RFP process to overcome the self-build bias—everything the Commission has done to try to ensure that “next time,” we will not repeat what happened with PGE in the 1970s—that nothing has changed. It appears that PGE is still operating off of the same self-build model it always has, and all the outward evidence suggests this outcome was preordained.

It is appropriate for the Commission to take a closer look. It is appropriate for the Commission to open an investigation. Given that PGE did not seek acknowledgement of its final short-list, it is appropriate for the Commission, as a part of the investigation process, to direct PGE to seek acknowledgment of its selection of the Abengoa EPC bid.

DATED this 19th day of July, 2013.

ESLER, STEPHENS & BUCKLEY, LLP

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## Abengoa selected for a new project in the USA for USD 364 million

The project is a 440 megawatt (MW) combined cycle power generation plant that will supply half the population of Portland, Oregon.

June 4, 2013 - Seville, Spain - Abengoa (MCE: ABG.B), a company that applies innovative technology solutions for sustainable development in the energy and environment sectors, has been selected by U.S. power company, Portland General Electric (PGE) to develop a 440-megawatt (MW) combined cycle power plant to supply electrical energy to half the population of Portland, Oregon. The project is valued at USD 364 million.

Abengoa will be responsible for the engineering, design and construction of the combined cycle power plant under the engineering, procurement and construction (EPC) "turnkey" system. The estimated time for the project is 36 months. Abengoa will not maintain any ownership interest in the assets it constructs.

The combined cycle plant will be capable of producing electricity from natural gas, an energy resource that exists locally in the U.S., offering an efficient response to the needs of nearby towns and increasing the country's energy independence. For this project, Abengoa has subcontracted Mitsubishi Power Systems Americas to supply the power block equipment which involves the gas turbine, the steam turbine and the heat recovery steam generator.

Manuel Sánchez Ortega, CEO of Abengoa, said: "We are very pleased by this new success in the United States, which is the first sale of this kind for us in the U.S., and by PGE's reliance on Abengoa. This contract is the result of the commercial efforts conducted by Abengoa's Engineering and Construction division. Thanks to this, Abengoa currently has a portfolio of business opportunities of over €100,000 million, 80% of which are contracts like this one, which do not require investment by Abengoa. We thus progress toward our goal of generating free cash flow at a corporate level in 2015."

Abengoa has extensive experience in this type of project, having developed similar facilities in Latin America and Europe. This project is the first of its kind to be built in the United States.

With this new contract, Abengoa consolidates its leadership position in the U.S. market, where it is currently developing numerous projects such as Solana, the world's largest solar power plant, located in the Arizona desert, and Hugoton, the first full-scale commercial plant producing second-generation ethanol from biomass, the most abundant organic material on earth.

In the United States, Abengoa generates employment for more than 4,000 people, including more than 1,200 direct employees. These figures represent an annual growth of 17% from two years ago. The company has offices in Washington, D.C., St. Louis, Denver, Phoenix and Austin. It is also present, through the development of projects and operations, in a total of 12 states across the country, in addition to the two R&D centers located in Denver and St. Louis.

### About Abengoa

Abengoa (MCE: ABG) is a company that applies innovative technology solutions for sustainable development in the energy and environment sectors, generating electricity from the sun, producing biofuels, desalinating sea water and recycling industrial waste. ([www.abengoa.com](http://www.abengoa.com))

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Rate Impact of Proposed Carty Generating Station

Year	Avg. Rate Base (\$ million)	Annual Depreciation (\$ million)	Revenue Requirement Impact (\$ million)
1	498	14.4	68.4
2	483	14.4	66.9
3	469	14.4	65.3
4	455	14.4	63.7
5	440	14.4	62.2
6	426	14.4	60.6
7	411	14.4	59.0
8	397	14.4	57.5
9	382	14.4	55.9
10	368	14.4	54.4
11	354	14.4	52.8
12	339	14.4	51.2
13	325	14.4	49.7
14	310	14.4	48.1
15	296	14.4	46.5
16	281	14.4	45.0
17	267	14.4	43.4
18	253	14.4	41.8
19	238	14.4	40.3
20	224	14.4	38.7
21	209	14.4	37.1
22	195	14.4	35.6
23	180	14.4	34.0
24	166	14.4	32.4
25	152	14.4	30.9
26	137	14.4	29.3
27	123	14.4	27.7
28	108	14.4	26.2
29	94	14.4	24.6
30	79	14.4	23.0
31	65	14.4	21.5
32	50	14.4	19.9
33	36	14.4	18.3
34	22	14.4	16.8
35	7	14.4	15.2
505.0			
Grossed-Up COC UE 262 Stipulation			10.851%
Original Cost (\$ million)			505

Original Cost = \$455 million + \$50 (assumed minimum AFUDC)

## CERTIFICATE OF SERVICE

I hereby certify that I served the foregoing **COMMENTS OF CALPINE CORPORATION** on the following persons on July 19, 2013, by hand-delivering, faxing, e-mailing, or mailing (as indicated below) to each a copy thereof, and if mailed, contained in a sealed envelope, with postage paid, addressed to said attorneys at the last known address of each shown below and deposited in the post office on said day at Portland, Oregon:

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by hand-delivery  
 by facsimile  
 by first class mail  
 by e-mail

DATED this 19<sup>th</sup> day of July, 2013.

ESLER, STEPHENS & BUCKLEY, LLP

By:           /s/ John W. Stephens            
John W. Stephens, OSB No. 773583  
[stephens@eslerstephens.com](mailto:stephens@eslerstephens.com)  
Of Attorneys for Calpine Corporation

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**BEFORE THE PUBLIC UTILITY COMMISSION  
OF OREGON**

**DR 46**

<b>In the Matter of</b>	)	<b>SUPPLEMENTAL COMMENTS</b>
	)	<b>OF CALPINE CORPORATION</b>
<b>TROUTDALE ENERGY CENTER, LLC</b>	)	
	)	
<b>Petition for Declaratory Ruling</b>	)	

**I. ABENGOA DOES NOT APPEAR TO BE A CREDITWORTHY CONTRACTOR**

PGE’s RFP requires a Bidder to meet certain prequalification credit requirements:

All transactions are contingent upon the Bidder meeting and maintaining the credit requirements established by PGE’s Credit Risk Management Department:

- Bidder’s or Bidder’s credit support provider’s (if any) long-term, senior unsecured debt that is not supported by third-party credit enhancement must be rated by one or more of the following agencies as follows: BBB- or higher by Standard & Poor’s and Fitch, BBB (low) by DBRS, or Baa3 or higher by Moody’s Investor Services, Inc. If the Bidder or Bidder’s credit support provider is rated by more than one agency, PGE will consider the lowest rating.
- Bidders that are not rated, and bids offering full project ownership, will be subject to review under PGE’s internal guidelines by PGE’s Credit Risk Management Department for qualification.

Typically, contracts will only be awarded to Bidders that have, at a minimum, investment grade credit rating. Alternatively, the Bidder must provide performance assurance in the form of a parental guarantee, a letter of credit and/or cash, based on the Bidder’s and/or Guarantor’s credit profile and the amount of expected financial exposure related to the bid. Further guidelines on PGE credit requirements are included in Appendix R.

RFP at 25-26 (copy attached). Appendix R provides the same thing (copy attached).

Abengoa’s long-term, senior unsecured debt is rated B with Negative Outlook, downgraded from B+, by Standard & Poor’s (Apr. 2, 2013); and B2, downgraded from B1, by Moody’s (Mar. 20, 2013). Copies of the S&P and Moody’s reports on Abengoa are attached. In S&P ratings, B is three steps below BBB–; and in Moody’s ratings, B is two (letter) steps below

Baa. (Moody's also appends "numerical modifiers" 1, 2, and 3, with 1 being the highest and 3 being the lowest.) B and B2 are both speculative grade, not investment grade, credit ratings.

The public is not aware whether Abengoa provided a performance assurance in the form of a parental guarantee, a letter of credit, and/or cash, but that is another reason why an investigation is appropriate.

## **II. ABENGOA HAS NEVER PARTICIPATED IN THE SUCCESSFUL DEVELOPMENT OF A CCGT SIMILAR TO THE PROPOSED CARTY PLANT IN THE UNITED STATES**

PGE's RFP also sought information about the Developer's experience developing projects similar to the proposed project in the United States and in the Pacific Northwest, in particular:

Describe the developer's participation in successfully developing power production projects in the U.S., emphasizing projects located in the Pacific Northwest and similar to the project proposed in the bid.

RFP, Appendix O, at 70 (copy attached).

As noted in the initial comments, Abengoa, by its own admission, has no experience in the design, engineering, procurement, and construction of combined cycle gas turbine facilities in the United States: "This project is the first of its kind to be built [by Abengoa] in the United States." Calpine Comments, p. 8 (quoting Abengoa (Abeinsa) press release, dated June 4, 2013, copy attached to original Comments).

Abengoa does not, therefore, have any experience with respect to the construction of a facility in Morrow (and Gilliam) County, Oregon—where, by way of example, Oregon energy facilities siting regulations apply, Oregon building and electrical codes apply, U.S. and Oregon labor and worker safety laws apply, U.S. and Oregon clean air, clean water, and other environmental laws apply, Oregon and County noise regulations apply, and other local (Morrow and Gilliam County) ordinances apply.

### **III. WAS PGE’S CHOICE OF ONE EPC CONTRACTOR FOR THE CARTY SITE A FOREGONE CONCLUSION?**

In PGE’s application to EFSC for a certificate for the Carty site, PGE “propose[d] to identify a qualified and credit-worthy contractor to execute an engineering, procurement and construction contract for the proposed facility.” EFSC Final Order, at 24 (June 29, 2012)(copy attached).

With fourteen months of hindsight, and in light of (1) PGE’s proposal to EFSC that PGE will identify a contractor to execute an EPC contract for the Carty site; (2) PGE’s willingness to choose a developer who by its own admission has not participated in successfully developing a CCGT project of this kind in the United States; and (3) PGE’s willingness to choose a bidder who did not meet the minimum prequalification credit requirements—there being no public information about a parental guarantee, a letter of credit and/or cash—a final point for a Commission investigation is whether the whole RFP process was essentially just cover, that it was effectively preordained that PGE was going to choose the “one EPC Bid at the Carty site...for the energy solicitation.” Closing Report of the IE at 33 (attached to original comments).

DATED this 28th day of August, 2013.

ESLER, STEPHENS & BUCKLEY, LLP

By: /s/ John W. Stephens  
John W. Stephens, OSB No. 773583  
Of Attorneys for Calpine Corporation

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PGE RFP for Power Supply Resources (Final Draft)

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Project name: Location: Initial in-service date(s): Nameplate capacity (MW): Expected monthly and annual energy generation (MWh):
---

Term Sheet: Fill out and provide a term sheet describing power product being bid, including any exceptions or modifications to the applicable sample term sheet found in the RFP. Submit the appropriate sample purchase agreement provided with the RFP including all requested changes (in redline) to the document. All modifications of the credit terms and conditions will be used for the credit evaluation:
--

Source of supply: Will the bid will be supplied from: A specific project. Listed projects. A system sale not necessarily tied to specific projects.  Identify all project(s) that will be used to supply the bid:
--

Price: Provide any additional price information not already captured in the term sheet:
--

Term: Include any provisions for renewal or extension:
--

Power Product Quality: Please indicate whether the Energy comes with all associated ancillary services including reserves.
---

Product-specific Information: Provide any additional information not already captured in the term sheet:
---

Resource Adequacy Considerations: For products supplied from a list of projects or system sales, will the Bidder assign specific regional resources to support the product? If so, identify the resources.
---



Credit Support and Quality of Credit

Provide the following:

A corporate organizational chart identifying the Bidder and, if applicable, the Bidder's Guarantor.

A list describing the relationship of the Bidder to its Guarantor, the developer and development team, or the thermal host, as applicable.

The unsecured credit ratings of the Bidder, the Bidder's Guarantor, the developer and the development team, or the thermal host, as applicable.

The most recent summary, opinion or update by S&P and Moody's, as applicable.

The Dun & Bradstreet number of the Bidder, the Bidder's Guarantor, developer and the development team, or the thermal host, as applicable.

For PPA bids, Bidder's audited financial statements for the three most recent fiscal years. In the event Bidder cannot provide the information, Bidder shall provide that information for its Guarantor.

For non-PPA bids audited financial statements for the three most recent fiscal years from the developer and development team (i.e., the project sponsors/owners).

Audited financial statements for the three most recent fiscal years from the thermal host associated with a cogeneration resource, as applicable.

All transactions are contingent upon the Bidder, or its Guarantor, meeting and maintaining the credit and performance assurance requirements established by PGE's Credit Risk Management Department.

<p>Describe the level of participation that PGE would be given in capital and O&amp;M decisions that could affect reliability of plant operations.</p> <p>Would PGE have any rights to require replacement of the plant operator?</p> <p>If so, under what conditions would PGE have such rights?</p> <p>Describe the Bidder's asset management strategy for future operation of the project.</p>
---

Information for Projects under Development

<p>For bids supplying power products from specific generating projects that will not be in commercial operation by August 8, 2012, please supply the following additional information.</p>
<p>Project name:</p>
<p><b>Permitting and Licensing Status</b></p> <p>List and describe the current status and jurisdictional responsibility for all licenses, permits, zoning variances, and other regulatory approvals necessary for the construction and operation of the project.</p> <p>Status categories include: approved, not approved but application deemed complete, not approved but application submitted, working on application, work on application has not begun.</p> <p>For each license, permit, zoning variance and regulatory approval that has not yet been obtained, show the sequencing and duration of permitting and licensing activities in a project schedule diagram, including expected construction time.</p> <p>For projects in the permitting and licensing phase, identify whether there is opposition to the siting of this project and how this opposition impacts project permitting.</p> <p>Discuss in general terms your approach for resolving these permitting issues or any planned mitigation measures.</p> <p>Could any of these permitting issues prevent successful siting of the project?</p>

<p><b>Progress to Date</b></p> <p>Describe the progress in development or construction of the project to date, including a description of any contracts or letters of intent signed in connection with the project, or a description of other factors demonstrating project progress.</p> <p>Include current status of project design and engineering, and equipment procurement.</p>
---

**Milestone Schedule**

Submit an overall milestone schedule for the generating project that identifies all key dates including but not limited to dates for regulatory approvals, finalization of transmission and interconnection agreements, finalization of fuel supply agreements, pre-construction milestones and construction milestones. The schedule that is submitted must be attainable and one to which the Bidder will commit to in the executed agreement. Include all aspects of the development including fuel and transmission infrastructure activities.

**Project name:**

**Experience of Developer Team**

Provide the following information:

- Describe the developer's participation in successfully developing power production projects in the U.S., emphasizing projects located in the Pacific Northwest and similar to the project proposed in the bid.

List members of the development team.

Provide a resume for each individual, including training, experience with power project development, functions performed, and area of expertise.

Summarize the current status and a short description of power project development efforts with which team members have been involved. The summary for each team member should include the type of projects developed, e.g., CCCT, biomass, current owner of the projects, geographic location and current status, e.g., operating, in construction, permitted, retired.

Describe business-related litigation in which the developer or development team members were previously, are currently or are expected to be engaged.

**Financial Plans**

Provide the financial information listed below to the extent the information is currently available:

**Project name:**

Describe whether the Bidder intends to internally finance construction of specific generating project(s), or plans to obtain project financing from another source.

Describe any existing commitments by financial institutions and provide documentation supporting these commitments. In lieu of such information, describe the plans for securing such commitments.

List the name, telephone number and contact person of the developer's:

Commercial bank:

Financial advisor:

Bond underwriter:

Other key financial trustee, advisor, counsel or lender:

<p>Provide a list of projects in the development phase, identifying the manufacturer of the principal components, counterparties in power sales agreement(s), the stage of completion of the project, the estimated operational date, the original estimated operational date, the percentage the project is over- or under-budget/schedule, and the project financing sources.</p>
<p>Identify the extent to which the developer is committed to providing additional assets if necessary to complete the project.</p>
<p>Has the Bidder already committed to proceed with construction of specific generating projects? If not, what actions or events would need to occur before the Bidder can commit to such construction?</p>
<p>If the decision to proceed with the generating project depends on obtaining power purchase and tolling agreements with third parties, please identify the amount of the project output that needs to be subscribed before the Bidder will proceed with construction, and the amount of firm commitments through executed agreements that the Bidder already has for output from the project. Identify the counterparty, product amount and term of each executed agreement.</p>

<p><b>Site Control</b> Site control is an important factor in our RFP evaluation, and should be interpreted to include the site itself, along with all required easements and access rights required for the site. Project name: Describe the level of control of the generation project site, e.g., ownership, lease, option, letter of intent. If the Bidder does not have control over the project site, describe the actions already taken to obtain control of the site.</p>
---

<p><b>Environmental Characteristics</b> Bidders supplying the product from a portfolio of resources and contracts should provide an estimate of energy production from the portfolio in terms of fuel type, e.g., 60 percent natural gas, 20 percent coal, 10 percent wind, 10 percent hydro. If the fuel source for contracts is unknown, list contracts as a separate category.</p>
<p>If supplying the product from one or more specific resources, provide the following information for each resource. Project name: Discuss known environmental issues related to the development and operation of the project. Describe environmental impacts of, and existing environmental constraints on, existing and proposed projects. Provide the information requested in the following subsections for existing and proposed projects.</p>

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PGE RFP for Power Supply Resources (Final Draft)

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A. Fixed Price Energy Contracts

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B. Capacity Contract

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Credit Threshold (Estimated) Matrix				
Range of Moody's Credit Rating				
Tangible Net Worth	Aaa - A1	A2 - A3	Baa1 - Baa2	Baa3
Up to \$250M	1,000,000	500,000	250,000	125,000
\$251M to \$500M	1,650,000	825,000	412,500	206,250
\$501M to \$750M	2,500,000	1,250,000	625,000	312,500
\$750M to \$1B	7,500,000	3,750,000	1,875,000	937,500
\$1B to \$25B	10,000,000	5,000,000	2,500,000	1,250,000
\$25 to \$50B	15,000,000	7,500,000	3,750,000	1,875,000
Over \$50B	20,000,000	10,000,000	5,000,000	2,500,000

PGE RFP for Power Supply Resources (Final Draft)

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Attachment 1

GUARANTY COMMITMENT LETTER

(Must be on letterhead of Bidder's credit support provider)

Portland General Electric Company  
121 SW Salmon Street  
3 World Trade Center - 0306  
Portland, Oregon 97204  
Attn: Credit Dept.

Dear Sirs:

\_\_\_\_\_, ("Bidder") (insert Bidder name) plans to submit a bid in response to the Portland General Electric Company's 2012 Request for Proposals ("RFP"). Bidder is the \_\_\_\_\_ (insert nature of relationship, wholly owned subsidiary, affiliate, etc.) of the undersigned. The undersigned will directly benefit from the bid submitted by Bidder into the RFP. And the undersigned and Bidder have their own, separate legally enforceable arrangements with respect to the undersigned's promise set forth in this letter.

The undersigned promises and agrees that, should we enter into a transaction with Bidder arising out of any bid submitted by Bidder in the RFP, with terms and conditions mutually acceptable to you and Bidder, that we will at that time issue an unconditional guaranty in form and substance reasonably satisfactory to you, and that we will guarantee all obligations of payment and performance of Bidder to you as our independent obligation, plus expenses of enforcing the guaranty.

We understand that said guaranty is a required item in evaluating the Bidder's bid and that the execution and delivery of the guaranty is a condition precedent to you entering into an agreement with Bidder. We also understand that you are under no obligation to enter into any agreement with Bidder, under the RFP or otherwise.

Yours truly,

(Name of guarantor)  
(Name of authorized officer)

Attachment 2

LETTER OF CREDIT COMMITMENT LETTER

(Must be on letterhead of Bidder's letter of credit issuer)

Portland General Electric Company  
121 SW Salmon Street  
3 World Trade Center - 0306  
Portland, Oregon 97204  
Attn: Credit Dept.

Dear Sirs:

\_\_\_\_\_, ("Bidder") (insert Bidder name) plans to submit a bid in response to the Portland General Electric Company's 2012 Request for Proposals ("RFP"). The undersigned promises that, should you enter into a transaction with Bidder arising out of any bid submitted by Bidder in the RFP, that we will at that time issue an irrevocable standby letter of credit form reasonably acceptable to you up to a maximum amount of \$\_\_\_\_\_.

We understand that said letter of credit is a requirement in evaluating the Bidder's bid and that the execution and delivery of the letter of credit is a condition precedent to you entering into an agreement with Bidder. We also understand that you are under no obligation to enter into any agreement with Bidder, under the RFP or otherwise.

Yours truly,  
(Name of letter of credit issuer)

# Abengoa S.A.

**Primary Credit Analyst:**

Jose R Abos, Madrid (34) 91-389-6951; jose.abos@standardandpoors.com

**Secondary Contact:**

Paulina Grabowiec, London (44) 20-7176-7051; paulina\_grabowiec@standardandpoors.com

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Rationale

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Standard & Poor's Base-Case Scenario

Company Description

Business Risk

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Liquidity

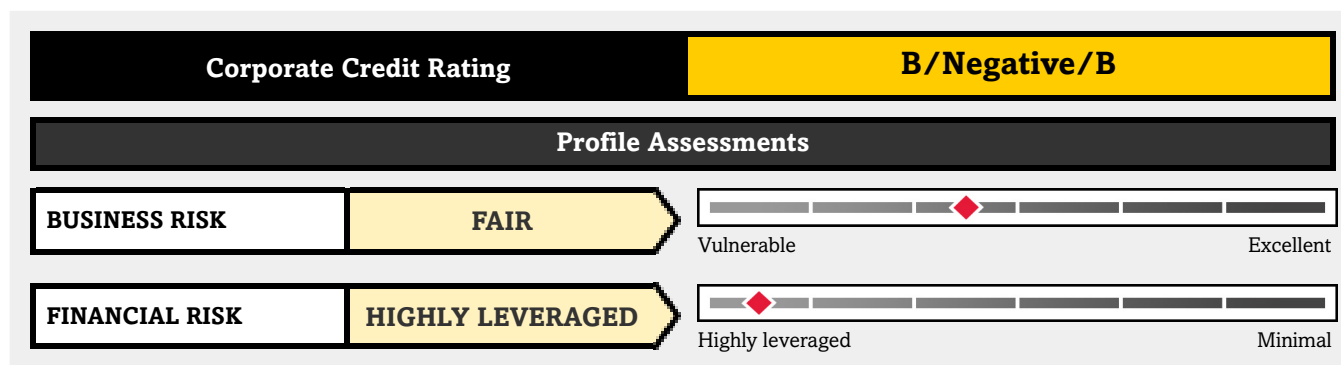
Covenant Analysis

Recovery Analysis

Reconciliation

Related Criteria And Research

# Abengoa S.A.



## Rationale

Business Risk: Fair	Financial Risk: Highly leveraged
<ul style="list-style-type: none"> <li>• Satisfactory business mix and geographic diversification.</li> <li>• Innovative engineering skills and proprietary technology.</li> <li>• Strong positions in stable concession-type and regulated businesses.</li> <li>• Marked deterioration of the solar business fundamentals in Spain and volatile and recently weak performance of the bioenergy business.</li> <li>• Asset-rotation policy that may imply the sale of more mature, cash-generative businesses, like Befesa Medio Ambiente, which weaken the business risk profile.</li> </ul>	<ul style="list-style-type: none"> <li>• Consolidated adjusted debt to EBITDA of 11x at year-end 2012 following aggressive debt-financed expansion over the past few years, and an uncertain deleveraging path.</li> <li>• Largely immature project portfolio, with consolidated positive free cash flow likely only from 2015.</li> <li>• Large working capital deficit, which could translate into high cash outflows if growth declines or commercial conditions deteriorate.</li> <li>• Perceived adequate liquidity.</li> <li>• Complex corporate structure, which reduces our visibility on cash circulation and the group's credit profile (excluding the nonrecourse activities).</li> </ul>

**Outlook: Negative**

The negative outlook on Spain-headquartered engineering and construction (E&C), technology, and energy group Abengoa S.A. reflects a one-in-three chance of a downgrade if the company's liquidity weakens, if proceeds from asset sales are not largely used for debt repayment, or if we do not see deleveraging over the medium term.

**Downside scenario**

More specifically we could lower the rating if:

- Abengoa's currently "adequate" liquidity weakens. This could occur, for instance, due to material unwinding of the sizable working capital deficit.
- There is no substantial reduction in negative consolidated free cash flow from 2014 onward, helped by a significant reduction in capital expenditures.
- Abengoa does not deleverage to below 9x adjusted consolidated debt to EBITDA by mid-2014, and gradually thereafter, for example if proceeds from asset sales or other nondebt sources are not used largely for debt repayment.
- We reassess Abengoa's business risk profile to "weak," in the absence of any offsetting change in our view of its financial risk profile. For example, we could revise down our opinion of business risk as "fair" as a consequence of sales of mature assets or deterioration in profitability or market conditions at its key profit contributors (E&C and concession-based activities).

**Upside scenario**

We could revise the outlook to stable if Abengoa reduces its capital expenditures and negative free cash flow materially over 2014-2015, after completion of its investment plan and the entry into full operation of projects currently in construction or at early stages of operations. In addition, we would expect continued "adequate" liquidity and progress on deleveraging. We would also take a positive view if Abengoa decided to use proceeds from asset sales for debt reduction beyond our expectations for the current rating level.

**Standard & Poor's Base-Case Scenario**

Assumptions	Key Metrics*			
<ul style="list-style-type: none"> <li>Continued opportunistic asset sales, which alters comparison of metrics across periods.</li> <li>On a constant-perimeter basis, low-to-mid single digit EBITDA growth in 2013 and closer to 10% in 2014, when most concession-based projects become operational. This, in our view, should also lead to moderate improvement in margins.</li> <li>A significant reduction in capital expenditures from 2013, following the completion of the company's investment program (see Key Metrics table).</li> </ul>	<b>2012A</b>	<b>2013E</b>	<b>2014E</b>	
	Consolidated EBITDA margin (%)	14.6	15-16	16-17
	Consolidated capex (bil. €)	3.4	1.9-2.1	0.8-0.9
	Consolidated debt/EBITDA (x)	11.0	8.5-9.5	7.5-8.5
	*Fully Standard & Poor's-adjusted. A--Actual. E--Estimate, like-for-like.			
	Adjusted EBITDA in 2012 excludes €85 million from the business combination of Rioglass Group and €26 million arising from litigation gain. We don't expect to see these nonrecurring items in 2013 and 2014.			
	Capital expenditure in 2012 excludes €194 million of capitalized interests. We do not expect this item to change markedly in 2013 and 2014.			

## Company Description

Founded in 1941, Abengoa S.A. is a global technological Spain-based group. It has interests across industries such as solar power generation, bioenergy, energy transmission, environmental services, and E&C. The group's business is not only diversified in terms of activities but also geographically (see table 1), with a strong presence in the U.S (which became the largest revenue contributor in 2012) and Latin America.

**Table 1**

Abengoa S.A. Revenue By Region			
(% of consolidated revenues)	2002	2011	2012
Spain	60	21	25
U.S.	9	19	26
Rest of Europe	6	15	16
Brazil	3	27	13
Rest of Latin America	19	11	13
Asia and Oceania	2	6	4
Africa	1	1	3

Source: company data.

Abengoa has relied particularly on its E&C activities, which we expect to remain the group's cash cow during the next few years (see table 2). Disregarding asset sales, we expect concession-type businesses (mainly solar projects and power transmission concessions) to account for about one-half of group EBITDA by 2015 after all the projects currently under construction or development mature. The group develops these lines of business mainly through



nonrecourse projects, typically under Abengoa's management or control in association with financial partners.

**Table 2**

<b>Abengoa S.A. Revenue, EBITDA, And Capital Expenditure By Division</b>				
<b>--As of Dec. 31, 2012--</b>				
<b>(Mil. €)</b>	<b>Total consolidated</b>	<b>E&amp;C (%)</b>	<b>Concession-type (%)</b>	<b>Industrial production (%)</b>
Revenues	7,783	52	6	42
EBITDA*	1,136	44	26	29
EBITDA margin (%)	14.6	12.7	64.9	10.5
Committed capital expenditure	3,288	--	82.1	17.9

\*€475 million generated by nonrecourse projects. E&C--Engineering and construction.

Abengoa is publicly traded. Its main shareholder is Inversion Corporativa IC, S.A. (IC; not rated), with 52.19% direct and indirect ownership.

## **Business Risk: Fair**

### **Diversification and solid technical abilities tempered by a still-immature project portfolio**

In our view, the major constraints of the "fair" business risk profile are:

- A still-immature project portfolio. Consequently, we do not expect consolidated free cash flow to turn positive before 2015 in our base case.
- When projects mature, the potential sale of more mature, cash-generative, concession-based assets could be negative from a business perspective.
- Exposure to commoditized businesses, such as ethanol. We believe that these businesses have a weaker business risk profiles than the group's other business, and they offer low synergies with the rest of the group's activities.
- A complex corporate structure. This includes intercompany loan transactions among subsidiaries and with the parent company--as a result of a cash-pooling strategy--posing difficulties in assessing cash circulation.

These constraints are partly offset by:

- A satisfactory mix of businesses and geographic diversification.
- Strengthening positions in sectors with more stable and predictable sources of revenue (mainly solar energy and transmission lines). We view these businesses as having above-average profitability.
- Reputed technical abilities and proprietary technology. We think these create competitive advantages, especially in the solar power generation business.
- Strong order backlog for the E&C division at about 1.6x in 2012 versus 2x in 2011, which we expect to continue to underpin revenue growth.

We assess Abengoa's management and governance as "fair" under our criteria. The group's historically aggressive expansion strategy and financial policy weigh negatively on our assessment. Furthermore, we see transparency and public detail of financial information at the corporate-only level (excluding consolidated nonrecourse projects) as a key weakness. Another negative is the lack of specific financial goals at both the corporate and consolidated levels beyond the targets established in the covenants included in the debt contracts.

### S&P Base-Case Operating Scenario

We expect Abengoa to continue opportunistic asset sales, which would alter the company's asset base. Forecasting is therefore a challenge, given that the asset base, revenue, margin and cash flow generation may not be fully comparable across periods.

We expect single-to-mid-single digit EBITDA growth in 2013 and about 10% in 2014, based on the following assumptions:

- Strong E&C revenue growth based on the existing backlog—equivalent to 1.6x revenues--and historical rate of conversion into revenues. We conservatively assume, however, a deceleration and downward trend in E&C EBITDA from 2014, given the completion of Abengoa's main capital expenditure program, the lack of new solar projects in Spain, and uncertainty on the bioenergy prospects worldwide. We also factor in a slight improvement in bioenergy EBITDA and margins from the historical trough reported in 2012.
- Revenues in concessions should increase materially on the back of the gradual implementation of the projects currently under construction. Excluding Spanish solar projects, we foresee an improvement of margins in concession-based projects as they become operational and mature.

### Peer comparison

Table 3

Abengoa S.A. Peer Comparison					
	Abengoa S.A.	Calpine Corp.	NRG Energy Inc.	Befesa Zinc S.A.U.	Veolia Environnement S.A.
Rating as of April 30, 2013	B/Negative/B	B+/Stable/--	BB-/Stable/NR	B/Watch Dev/--	BBB+/Negative/A-2
<b>(Mil. €)</b>	<b>--Fiscal year ended Dec. 31, 2012--</b>				
Revenues	7,783.3	4,155.4	6,388.5	252.3	29,438.5
EBITDA	1,136.1	1,037.7	1,057.8	83.3	3,165.7
Operating income	664.4	760.9	311.3	65.4	1,191.7
EBIT	738.4	768.5	353.8	69.2	1,301.8
Interest expense	802.7	609.2	622.3	29.1	969.2
Net income from continuing operations	125.4	151.0	424.0	25.4	7.7
Funds from operations (FFO)	301.3	483.1	757.1	45.3	2,064.1
Capital expenditures	3,400.8	454.4	1,040.5	25.4	3,807.8
Free operating cash flow	(3,357.9)	33.3	(247.1)	11.8	(1,640.8)
Discretionary cash flow	(3,394.6)	33.3	(285.0)	10.9	(2,187.4)
Debt	12,524.8	8,594.0	7,439.3	261.8	20,019.4
Equity	1,831.6	3,076.7	8,178.7	167.1	9,081.2
<b>Adjusted ratios</b>					
Annual revenue growth (%)	9.8	(20.7)	(8.6)	13.3	(0.7)
EBITDA margin (%)	14.6	25.0	16.6	33.0	10.8
EBITDA interest coverage (x)	1.4	1.7	1.7	2.9	3.3
EBIT interest coverage (x)	0.9	1.3	0.6	2.4	1.3
Return on capital (%)	5.4	6.5	2.4	15.4	4.3

**Table 3**

<b>Abengoa S.A. Peer Comparison (cont.)</b>					
FFO/debt (%)	2.4	5.6	10.2	17.3	10.3
Free operating cash flow/debt (%)	(26.8)	0.4	(3.3)	4.5	(8.2)
Discretionary cash flow/debt (%)	(27.1)	0.4	(3.8)	4.2	(10.9)
Debt/EBITDA (x)	11.0	8.3	7.0	3.1	6.3
Total debt/debt plus equity (%)	87.2	73.6	47.6	61.0	68.8

## Financial Risk: Highly leveraged

### High debt burden owing to rapid expansion through debt financing, combined with a still-low cash flow contribution

We base our assessment of Abengoa's financial risk profile on:

- Fully consolidated accounts, including the consolidation of all contractually nonrecourse commitments made by Abengoa's projects; and
- On corporate accounts only, meaning excluding the projects financed on a nonrecourse basis, but mainly based on management information.

We acknowledge that neither approach reflects the exact scope of the group's profits and commitments. We believe that the group will have strong economic incentives to support certain contractually nonrecourse transactions, although this support is likely to be limited to the projects on which its reputation and knowhow is established. The ultimate contribution could vary, in our view, depending on the specific situation of the nonrecourse subsidiary in need of support. Because of this, we assess the group's commitments as somewhere in between the full consolidation of the nonrecourse obligations and the unconsolidated obligations.

The main weaknesses of Abengoa's "highly leveraged" financial risk profile are:

- The rapid, mostly debt-financed growth of its business.
- Weak cash flow protection measures. This, in our view, results mainly from the group's debt-funded expansion, combined with a still-low contribution from projects.
- Ongoing negative discretionary cash flow, owing to the group's capital-intensive businesses. We do not expect consolidated free operating cash flow to turn positive until 2015.
- The very large working capital deficit. This involves the risk of working capital outflows if the group's growth (notably at E&C) decelerated materially or commercial terms worsened significantly.
- The increasing amount of cash-collateralized of substantial amount of non-recourse confirming of payables with financial entities, albeit solely at the non-recourse activities, which restricts available cash.

### Financial summary

Table 4

<b>Abengoa S.A. Financial Summary</b>					
<b>--Fiscal year ended Dec. 31--</b>					
<b>(Mil. €)</b>	<b>2012</b>	<b>2011</b>	<b>2010*</b>	<b>2009*</b>	<b>2008*</b>
Revenues	7,783.3	7,089.2	4,859.8	4,147.3	3,769.2
EBITDA	1,136.1	1,103.6	814.6	752.2	522.7
Operating income	664.4	845.3	550.7	432.8	364.9
EBIT	738.4	937.4	608.5	511.7	475.2
Interest Expense	802.7	795.0	531.1	416.8	421.7
Net income from continuing operations	125.4	165.9	159.2	170.3	140.4
Funds from operations (FFO)	301.3	348.3	216.1	436.8	230.7
Capital expenditures	3,400.8	2,749.2	1,949.4	2,078.5	1,850.6
Free operating cash flow	(3,357.9)	(1,332.3)	(1,355.7)	(1,894.6)	(1,140.6)
Discretionary cash flow	(3,394.6)	(1,350.4)	(1,372.9)	(1,910.8)	(1,156.0)
Debt	12,524.8	10,855.8	9,550.7	6,996.5	4,892.3
Equity	1,831.6	1,726.2	1,630.3	1,171.0	627.5
<b>Adjusted ratios</b>					
Annual revenue growth (%)	9.8	45.9	17.2	10.0	17.3
EBITDA margin (%)	14.6	15.6	16.8	18.1	13.9
EBITDA interest coverage (x)	1.4	1.4	1.5	1.8	1.2
EBIT interest coverage (x)	0.9	1.2	1.1	1.2	1.1
Return on capital (%)	5.4	7.7	6.1	7.3	8.2
FFO/debt (%)	2.4	3.2	2.3	6.2	4.7
Cash flow from operations/debt (%)	0.3	13.1	6.2	2.6	14.5
Free operating cash flow/debt (%)	(26.8)	(12.3)	(14.2)	(27.1)	(23.3)
Discretionary cash flow/debt (%)	(27.1)	(12.4)	(14.4)	(27.3)	(23.6)
Debt/EBITDA (x)	11.0	9.8	11.7	9.3	9.4
Debt/debt and equity (%)	87.2	86.3	85.4	85.7	88.6

\*Due to material discontinued operations, only figures for 2012 and 2011 are fully comparable.

## Liquidity: Adequate

Our short-term rating on Abengoa is 'B' under our criteria governing the link between long-term and short-term ratings for corporate and sovereign issuers. It takes into account Abengoa's long-term corporate credit rating and our assessment of the group's liquidity as "adequate."

For our liquidity assessment, we rely partly on management information, detailing the liquidity at different entities. According to this information, and our operating and financial baseline forecast, we expect Abengoa's sources of liquidity over the next 12 to 18 months to comfortably exceed its uses by 1.2x or more, the minimum threshold for an "adequate" liquidity designation under our criteria.

We have not taken into account the sale proceeds from Befesa Medio Ambiente, as we do not know exactly how much of them Abengoa will use to repay debt.

Principal Liquidity Sources	Principal Liquidity Uses
<p>Consolidated liquidity position (including all contractually nonrecourse-financed projects) as of Dec. 31, 2012:</p> <ul style="list-style-type: none"> <li>• Unrestricted cash balances: €2.5 billion, excluding a sizable €940 million of cash and short-term investments needed as collateral for confirming of nonpayables, virtually all at nonrecourse projects;</li> <li>• Available committed long-term credit lines of €1.52 billion;</li> <li>• Equity of €155 million committed by partners in projects financed on a nonrecourse basis;</li> <li>• €650 million of proceeds from bonds issued since the beginning of 2013; and</li> </ul> <p>Corporate-only liquidity position (excluding all contractually nonrecourse-financed projects) as of Dec. 31, 2012:</p> <ul style="list-style-type: none"> <li>• Unrestricted cash balances of €2.2 billion;</li> <li>• Available committed long-term credit lines of €145 million;</li> <li>• €650 million from bonds issued at the beginning of this year; and</li> </ul>	<p>Consolidated liquidity position (including all contractually nonrecourse-financed projects) as of Dec. 31, 2012:</p> <ul style="list-style-type: none"> <li>• Debt maturities of €1.1 billion;</li> <li>• Negative discretionary cash flow of €1.5 billion under our baseline scenario in 2013, due to continued heavy capital expenditure of €2.0 billion. From 2014, we expect free cash flow to become materially less negative, assuming capital spending drops to an estimated €0.8 billion; and</li> <li>• Potential important working capital outflows depending on the evolution of working capital item, together with cash needs potentially arising to collateralize confirmed payables and fluctuations in advance payments at the E&amp;C division.</li> </ul> <p>Corporate-only liquidity position (excluding all contractually nonrecourse-financed projects) as of Dec. 31, 2012:</p> <ul style="list-style-type: none"> <li>• €537 million of debt maturities; and</li> <li>• Negative discretionary cash flow (operating cash flow after capital expenditures and dividends) of up to €660 million, under our forecast.</li> </ul>

### Debt maturities

Consolidated (including all contractually nonrecourse-financed project debt). As of Dec. 31, 2012, but pro forma the €650 million issued in January 2013:

- 2013: €779 million
- 2014: €1,179 million
- 2015: €1,259 million
- 2016: €1,607 million
- 2017 and beyond: €6,923 million

Corporate-only (excluding contractually nonrecourse-financed project debt). As of Dec. 31, 2012, but pro forma the €650 million issued in January 2013:

- 2013: €187 million
- 2014: €650 million
- 2015: €960 million
- 2016: €1,324 million
- 2017 and beyond: €1,665 million

## Covenant Analysis

Compliance Expectations	Schedule Of Step-Downs/Step-Ups
<p>Covenant: Both the incurrence covenant on Abengoa's senior unsecured notes and the maintenance covenant on most of the group's bank debt specify debt-to-EBITDA ratios of less than 3x, where debt and EBITDA exclude nonrecourse subsidiaries. However, debt is netted against total consolidated cash and short-term financial investments, including those held by nonrecourse subsidiaries. Furthermore, the syndicated bank facility renewed in May 2012 includes a more demanding ratio of 2.5x net debt to EBITDA from June 30, 2015. As of Dec. 31, 2012 (the most recent covenant calculation date), the ratio was 1.8x. We expect the group would maintain sufficient covenant headroom even if EBITDA were to decline by 15%.</p>	<p>Current: 3x</p> <p>Starting June 30, 2015: 2.5x</p>

## Recovery Analysis

- The recovery and debt ratings reflect our valuation of Abengoa as a going concern. They are underpinned by Abengoa's diversified portfolio of businesses, some of which benefit from a strong growth profile and regulated environments, and the group's strong reputation in the engineering and construction business.
- Recovery prospects are, in our view, constrained by Abengoa's exposure to various insolvency regimes post-default, including Spain, which we assume would be the center of main interests (COMI) in of the event of insolvency. In addition, we view the guarantee package as relatively limited as it doesn't contain asset pledges, but provides lenders with direct recourse only to the group's corporate businesses (that is, excluding project assets that comprise a substantial proportion of the group's operations).
- In order to determine recoveries, we simulate a default scenario. We base this scenario on the assumption that a payment default would be triggered in 2015 and would most likely result from Abengoa's underperformance in the bioenergy business, combined with high capital expenditures and rising cost of capital.
- We value Abengoa as a going concern. In light of the asset-heavy nature of the business, we use a discrete asset valuation as a proxy to estimate the company's enterprise value at the point of default. In our valuation, we give only limited credit to Abengoa's equity ownership in the nonrecourse projects. However, we recognize that a default at Abengoa would not necessarily uniformly affect the performance of the project assets, and, therefore, there could be additional value available to lenders if performing projects can be sold.
- We assume about €2.5 billion of senior unsecured debt outstanding at default, although we also assume that a portion of guarantee claims given by Abengoa could materialize at default. On Dec. 31, 2012, Abengoa reported third-party guarantee claims totaling about €5.97 billion, but we only include a portion of these potential claims in

our waterfall. Overall, we believe there would be sufficient value for lenders to recover in the 30%-50% range, assuming any crystallized guarantee claims ranking pari passu with the unsecured debt. Recovery prospects are at the low end of the range.

### Simulated default and valuation assumptions

- Year of default: 2015
- Jurisdiction: Spain

### Simplified waterfall

- Gross enterprise value at default: €2.7 billion
- Administrative costs & priority claims: €228 million
- Net value available to creditors: €2.5 billion
- -----
- Unsecured debt claims: €2.5 billion\*
- --Recovery expectation: 30%-50%§

\*All debt amounts include six months' prepetition interest. §Assuming a portion of the potential €5.97 billion third-party guarantee claims in the waterfall.

## Reconciliation

Table 5

### Reconciliation Of Abengoa S.A. Reported Amounts With Standard & Poor's Adjusted Amounts (Mil. €)

--Fiscal year ended Dec. 31, 2012--

#### Abengoa S.A. reported amounts

	Debt	Shareholders' equity	Revenues	EBITDA	Operating income	Interest expense	Cash flow from operations	Cash flow from operations	Dividends paid	Capital expenditures
Reported	11,923.6	1,071.5	7,783.3	1,246.3	774.6	487.5	442.7	442.7	36.6	3,593.7
<b>Standard &amp; Poor's adjustments</b>										
Trade receivables sold or securitized	556.0	--	--	--	--	22.6	(210.0)	--	--	--
Operating leases	12.0	--	--	0.8	0.8	0.8	4.6	4.6	--	1.6
Capitalized interest	--	--	--	--	--	194.4	(194.4)	(194.4)	--	(194.4)
Asset retirement obligations	33.2	--	--	--	--	--	--	--	--	--
Reclassification of nonoperating income (expenses)	--	--	--	--	74.0	--	--	--	--	--

**Table 5**

<b>Reconciliation Of Abengoa S.A. Reported Amounts With Standard &amp; Poor's Adjusted Amounts (Mil. €) (cont.)</b>										
Reclassification of working-capital cash flow changes	--	--	--	--	--	--	--	48.4	--	--
Minority interests	--	760.1	--	--	--	--	--	--	--	--
EBITDA - Other*	--	--	--	(111.0)	(111.0)	--	--	--	--	--
Interest expense - Derivatives	--	--	--	--	--	97.4	--	--	--	--
Total adjustments	601.2	760.1	0.0	(110.2)	(36.2)	315.2	(399.8)	(141.4)	0.0	(192.8)
<b>Standard &amp; Poor's adjusted amounts</b>										
	<b>Debt</b>	<b>Equity</b>	<b>Revenues</b>	<b>EBITDA</b>	<b>EBIT</b>	<b>Interest expense</b>	<b>Cash flow from operations</b>	<b>Funds from operations</b>	<b>Dividends paid</b>	<b>Capital expenditures</b>
Adjusted	12,524.8	1,831.6	7,783.3	1,136.1	738.4	802.7	42.9	301.3	36.6	3,400.8

\*Nonrecurring items: €85 million from the business combination of Rioglass Group and €26 million arising from a litigation gain.

## Related Criteria And Research

All articles listed below are available on RatingsDirect.

### Related criteria

- Methodology: Management And Governance Credit Factors For Corporate Entities And Insurers, Nov. 13, 2012
- Methodology: Business Risk/Financial Risk Matrix Expanded, Sept. 18, 2012
- Methodology: Short-Term/Long-Term Ratings Linkage Criteria For Corporate And Sovereign Issuers, May 15, 2012
- Methodology And Assumptions: Liquidity Descriptors For Global Corporate Issuers, Sept. 28, 2011
- 2008 Corporate Criteria: Ratios And Adjustments, April 15, 2008
- 2008 Corporate Criteria: Analytical Methodology, April 15, 2008

### Related research

- Research Update: Abengoa And Subsidiary Befesa Downgraded To 'B' On Weakening Performance And Uncertain Deleveraging; Outlook Negative, April 2, 2013



## Business And Financial Risk Matrix

Business Risk	Financial Risk					
	Minimal	Modest	Intermediate	Significant	Aggressive	Highly Leveraged
Excellent	AAA/AA+	AA	A	A-	BBB	--
Strong	AA	A	A-	BBB	BB	BB-
Satisfactory	A-	BBB+	BBB	BB+	BB-	B+
Fair	--	BBB-	BB+	BB	BB-	B
Weak	--	--	BB	BB-	B+	B-
Vulnerable	--	--	--	B+	B	B- or below

**Note:** These rating outcomes are shown for guidance purposes only. The ratings indicated in each cell of the matrix are the midpoints of the likely rating possibilities. There can be small positives and negatives that would lead to an outcome of one notch higher or lower than the typical matrix outcome. Moreover, there will be exceptions that go beyond a one-notch divergence. For example, the matrix does not address the lowest rungs of the credit spectrum (i.e., the 'CCC' category and lower). Other rating outcomes that are more than one notch off the matrix may occur for companies that have liquidity that we judge as "less than adequate" or "weak" under our criteria, or companies with "satisfactory" or better business risk profiles that have extreme debt burdens due to leveraged buyouts or other reasons. For government-related entities (GREs), the indicated rating would apply to the standalone credit profile, before giving any credit for potential government support.

## Ratings Detail (As Of April 30, 2013)

### Abengoa S.A.

Corporate Credit Rating B/Negative/B  
Senior Unsecured B

### Corporate Credit Ratings History

02-Apr-2013	<i>Foreign Currency</i>	B/Negative/B
27-Dec-2012		B+/Watch Neg/B
27-Jun-2012		B+/Stable/B
13-Oct-2010		B+/Stable/--
02-Apr-2013	<i>Local Currency</i>	B/Negative/B
27-Dec-2012		B+/Watch Neg/B
27-Jun-2012		B+/Stable/B
13-Oct-2010		B+/Stable/--

### Related Entities

#### Befesa Zinc S.A.U.

Issuer Credit Rating B/Watch Dev/--  
Senior Secured B/Watch Dev

#### Zinc Capital S.A.

Senior Secured B/Watch Dev

\*Unless otherwise noted, all ratings in this report are global scale ratings. Standard & Poor's credit ratings on the global scale are comparable across countries. Standard & Poor's credit ratings on a national scale are relative to obligors or obligations within that specific country.

### Additional Contact:

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**Rating Action: Moody's downgrades Abengoa to B2 from B1; stable Outlook**

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**Global Credit Research - 20 Mar 2013**

Frankfurt am Main, March 20, 2013 -- Moody's Investors Service today downgraded Abengoa S.A.'s ("Abengoa") corporate family rating (CFR) and probability of default rating (PDR) to B2 and B2-PD from B1 and B1-PD respectively. Moody's also downgraded the ratings on Abengoa's senior unsecured notes to B2 from B1 issued by Abengoa S.A. and Abengoa Finance S.A.U. The outlook has been changed to stable.

**Downgrades:**

..Issuer: Abengoa Finance, S.A.U.

....Senior Unsecured Regular Bond/Debenture Nov 1, 2017, Downgraded to B2 (LGD3, 45%) from B1 (LGD3, 47%)

....Senior Unsecured Regular Bond/Debenture Feb 5, 2018, Downgraded to B2 (LGD3, 45%) from B1 (LGD3, 46%)

..Issuer: Abengoa S.A.

.... Probability of Default Rating, Downgraded to B2-PD from B1-PD

.... Corporate Family Rating, Downgraded to B2 from B1

....Senior Unsecured Regular Bond/Debenture Mar 31, 2016, Downgraded to B2 (LGD3, 45%) from B1 (LGD3, 47%)

....Senior Unsecured Regular Bond/Debenture Feb 25, 2015, Downgraded to B2 (LGD3, 45%) from B1 (LGD3, 47%)

**Outlook Actions:**

..Issuer: Abengoa Finance, S.A.U.

....Outlook, Changed To Stable From Negative

..Issuer: Abengoa S.A.

....Outlook, Changed To Stable From Negative

**RATINGS RATIONALE**

Today's rating action was prompted by Abengoa's high leverage in fiscal year 2012 both on a consolidated level including non-recourse debt related to its concession activities (Moody's adjusted net debt/EBITDA of 9.7x) and based on reported corporate gross debt (reported gross debt/EBITDA 6.1x) as well as our reduced expectations of only slow deleveraging over the next 12 to 18 months due to weaker than previously expected EBITDA generation in 2013.

The persistent high leverage increases Abengoa's vulnerability to a deterioration in operating performance and cash flow generation at any of its major divisions. Abengoa guides for consolidated EBITDA of EUR1,350- EUR1,400 million in 2013 which is below our previous estimate for 2013 as a result of continued weak prospects for the biofuels segment in Europe and the US as well as the negative impact from the recent Spanish regulatory measures to address the tariff deficit in the Spanish electricity sector.

While the group's asset disposal strategy could support future debt reduction, Abengoa might use the proceeds over time to fund future growth of its concession portfolio. In case of major asset disposals we would also consider the resulting balance between mature and profitable assets versus new investments.

Moody's includes the non-recourse debt related to its concession business in its credit metrics as the rating

agency believes that, in case of need, the company would likely support the debt at the concession activities given reputational risks and the high margins with positive long-term prospects associated with these activities.

However, Abengoa's B2 rating continues to be supported by the good medium term revenue and cash flow generation visibility of its concession activities once in operation which could support leverage reduction in the long run.

Under its capex plan per 31 December 2012, Abengoa expects to invest approximately EUR3.2 billion on a consolidated basis in the period 2013-2015 for the development of its concessions business. Abengoa will inject equity of EUR856 million (26%) into these non-recourse projects, with the remainder to be funded by committed project finance and equity contributions from partners.

Abengoa's liquidity at corporate level is sufficient for its near-term requirements over the next 12 to 18 months. At 31 December 2012, Abengoa had EUR2.3 billion cash and marketable securities at corporate level. However, this cash balance reflects to a significant extent drawings under Abengoa's syndicated loans of EUR 1.8 billion and its liquidity cushion could deplete in case of unexpected working capital swings.

The recent EUR400 million convertible bond issuance and the EUR250 million senior unsecured notes issuance in the current year reduced near-term debt maturities in 2013 (to EUR187 million) and 2014 (to EUR650 million) but Abengoa continues to face sizeable debt maturities in 2015 (EUR960 million) and 2016 (EUR1.3 billion), requiring continued access to capital markets and roll-over of its syndicated term loans. Abengoa's debt maturities and planned committed equity investments in concessions (EUR624 million in 2013) represent the company's main cash needs which are covered by the cash balance for the next 12 to 18 months.

The covenants in Abengoa's loan agreements cap net corporate debt/corporate EBITDA (R&D expenses added back) at 3.0x and the company had sufficient headroom under this covenant at 31 December 2012 (actual level 1.8x). We expect the company will maintain sufficient headroom under this covenant in future.

We expect that the share of EBITDA from its concession portfolio will increase over time and will provide for stable earnings and cash contributions, hence the stable outlook. It also reflects our expectation that Abengoa will maintain adequate liquidity and sufficient headroom under financial covenants.

Other factors considered in the B2 ratings are (1) the weak macroeconomic environment affecting Spain, where the company is domiciled and generates approximately 25% of its revenues, and austerity measures implemented by the government; (2) the high proportion of the company's engineering and construction (E&C) projects that require significant equity contributions; (3) the company's need for continued regulatory support with regard to its innovation, solar energy generation or power transmission activities; (4) technical challenges the E&C segment faces to complete advanced installations on time and on budget, albeit mitigated by Abengoa's consistent long-term trend track record of growth and profitability; (5) the diversity of its businesses, both in terms of industry and geography, with limited correlation; and (6) management's strategy to enter into new concessions only once project finance (and partner equity) is firmly committed.

#### WHAT COULD CHANGE THE RATING UP/DOWN

Abengoa's ratings could be downgraded if the company's liquidity profile worsens or if the company fails to reduce Moody's adjusted net consolidated debt/EBITDA to around 8.0x in the next 12 to 18 months (9.7x at 31 December 2012). In the event of any of the above, Moody's would take account of the quality of Abengoa's investments, its financial strategy and the maturity of its concession portfolio.

Abengoa's ratings could be upgraded if Abengoa reduces leverage on a sustainable basis evidenced by (1) Abengoa's reported net corporate debt/EBITDA at or below 3.0x (3.2x at 31 December 2012); (2) reported gross corporate debt /EBITDA moving below 5.5x (6.1x at 31 December 2012) and (3) Moody's-adjusted net debt EBITDA moving comfortably below 7.0x (9.7x at 31 December 2012). In addition, rating upward pressure would require further improvements in its liquidity profile with a more balanced debt maturity profile.

#### PRINCIPAL METHODOLOGY

The principal methodology used in these ratings was the Global Heavy Manufacturing Rating Methodology published in November 2009. Other methodologies used include Loss Given Default for Speculative-Grade Non-Financial Companies in the U.S., Canada and EMEA published in June 2009. Please see the Credit Policy page on [www.moodys.com](http://www.moodys.com) for a copy of these methodologies.

Abengoa S.A. is a vertically integrated environment and energy group whose activities range from engineering &

construction and utility-type operation (via concessions) of solar energy plants, electricity transmission networks and water treatment plants to industrial production activities such as biofuels and metal recycling. Headquartered in Seville, Spain, Abengoa generated EUR7.8 billion in revenues in 2012, of which 75% came from outside Spain.

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**BEFORE THE  
ENERGY FACILITY SITING COUNCIL  
OF THE STATE OF OREGON**

IN THE MATTER OF THE APPLICATION FOR A SITE  
CERTIFICATE FOR THE CARTY GENERATING STATION

FINAL ORDER

Issued by the Energy Facility Siting Council  
June 29, 2012



1 PGE has constructed and operated several facilities similar to the proposed Carty Generating Station.  
2 In 2007, PGE completed the construction of the 406 MW Port Westward combined cycle gas turbine  
3 facility in Clatskanie, Oregon. In July 2001, PGE completed the construction of a new 24.9-MW simple  
4 cycle gas turbine project located at the Beaver Generation Facility. In 1995 PGE placed into service  
5 Coyote Springs Unit 1, a 240-MW combined cycle combustion turbine. Currently, PGE operates  
6 approximately 1,800 MW of thermal generation. In addition to thermal energy generation facilities, PGE  
7 currently operates 630 MW of hydroelectric generation and 275 MW of wind generation.<sup>82</sup>

8 **The Applicant proposes to identify a qualified and credit-worthy contractor to execute an engineering,  
9 procurement and construction contract for the proposed facility.** PGE has not yet selected a turbine  
10 vendor, but expects that one or more of the following manufacturers will provide the turbines for the  
11 Carty facility: Siemens, MHI, General Electric, Alstom or an equivalent.<sup>83</sup> PGE has not identified  
12 specific internal personnel to be responsible for the design, construction, and operation of the proposed  
13 facility; however, PGE has a number of qualified individuals on staff to supervise these tasks.<sup>84</sup> **The  
14 Applicant has not identified the environmental expertise of the proposed contractors and their ability to  
15 comply with the site certificate conditions, although the application states that PGE will oversee and be  
16 extensively involved in the construction process. Because not all major contractors were chosen before  
17 the final ASC was deemed complete, the Council adopts Condition IV.B.2.1 requiring the certificate  
18 holder to inform the Department of the identity of all major design, engineering, and construction  
19 contractors before beginning construction.**

20 In recent years, PGE has received the following regulatory citations related to the operation of  
21 existing generating facilities:

- 22 • 2006 - \$300 fine related to hazardous waste and underground storage tank inspections. The  
23 eighteen violations cited included sixteen related to records, labeling of waste storage areas,  
24 storage of waste aerosol cans and fluorescent bulbs. The remaining two violations, resulting in a  
25 total \$300 fine for the year, involved failure to conduct a third party audit for storage tanks.
- 26 • 2009 - Warning letter from the DEQ for the Beaver Generating Plant for exceedance of total  
27 suspended solids at one outfall.
- 28 • 2009 – Warning letter from the DEQ for the Port Westward Generating Plant for failure to  
29 conduct annual testing for ammonia at one emission unit location in 2008.

30 The conditions for which these citations were issued have been corrected. PGE has not received a  
31 monetary penalty or fine for regulatory violations at the Beaver natural gas fired generating facility since  
32 it began operation in 1974. No regulatory agency has levied any monetary penalty or fine against the  
33 Coyote Springs Power Plant or Port Westward Facility as a result of construction, operation or  
34 maintenance of those facilities, as of May 2011 (when the Carty Final ASC was submitted).<sup>85</sup>

35 The Council adopts Condition IV.B.2.2, which requires construction staff to include a full-time on-  
36 site manager who is qualified in environmental compliance to ensure compliance with all site certificate  
37 conditions. The Council adopts Conditions IV.B.2.3 and IV.B.2.4, which require all contractors and  
38 subcontractors working on the project to obtain all required permits, and comply with all applicable laws  
39 and regulations and with the terms of the site certificate. The Council also adopts Condition IV.B.2.5,  
40 which states that non-compliance with the site certificate, and any subsequent notice of violation or civil  
41 penalty, is the responsibility of the certificate holder.

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82 Final ASC, Section D.2, p. D-1

83 Final ASC, Section D.4, p. D-2

84 Final ASC, Section D.3, p. D-2

85 Final ASC, Section D.5, p. D-3

1 The Council adopts Condition IV.B.2.6 requiring the applicant to notify the Department in advance of  
2 work that does not meet the definition of “construction” as defined in ORS 469.300 and Condition  
3 IV.B.2.7 requiring the certificate holder to notify the Department of conditions or circumstances that may  
4 violate the terms or conditions of the site certificate within 72 hours of discovery.<sup>86</sup> In addition, the  
5 Council adopts Condition IV.B.2.8, which is a mandatory condition under Council rules, regarding  
6 notification to the Department of any facility ownership change.

7 In summary, the application presents evidence showing the Applicant’s experience developing  
8 thermal energy projects in Oregon. The evidence provided shows that the Applicant has, in the past,  
9 designed, constructed and operated such facilities in compliance with site certificate conditions and with  
10 the Council’s standards. Although the application did not include specific evidence of past experience  
11 with retiring energy facilities, the Applicant’s ability to retire the Carty facility to a useful, non-hazardous  
12 condition is evaluated in detail in Section IV.G, Retirement and Financial Assurance.

13 For the reasons discussed above, and subject to compliance with the site certificate conditions in  
14 Sections IV.B.2 and IV.G.2, the Council finds that the applicant has demonstrated the ability to design,  
15 construct and operate the proposed facility in compliance with site certificate conditions and in a manner  
16 that protects public health and safety and has demonstrated the ability to restore the site to a useful, non-  
17 hazardous condition.

18 **IV.B.2. ORGANIZATIONAL EXPERTISE: SITE CERTIFICATE CONDITIONS**

19 **IV.B.2.1** Before beginning construction, the certificate holder must notify the Department of the  
20 identity and qualifications of the major design, engineering, and construction  
21 contractor(s) for the facility. The certificate holder must select contractors that have  
22 substantial experience in the design, engineering, and construction of similar facilities.  
23 The certificate holder must report to the Department any change of major contractors.  
24 [Site Certificate Condition 5.1]

25 IV.B.2.2 During construction, the certificate holder must have a full-time, on-site manager who is  
26 qualified in environmental compliance to ensure compliance with all site certificate  
27 conditions. The certificate holder must notify the Department of the name, telephone  
28 number, and e-mail address of this person prior to the start of construction and  
29 immediately upon any change in the contact information.  
30 [Site Certificate Condition 6.1]

31 IV.B.2.3 The certificate holder must contractually require all construction contractors and  
32 subcontractors involved in the construction of the facility to comply with all applicable  
33 laws and regulations and with the terms and conditions of the site certificate. Such  
34 contractual provisions do not relieve the certificate holder of responsibility under the site  
35 certificate.  
36 [Site Certificate Condition 5.2]  
37

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<sup>86</sup> The Council has previously included these same conditions in site certificates, including the Montague Wind Power Facility, Klamath Generation Facility, Helix Wind Power Facility, and the Summit Ridge Wind Farm.

## CERTIFICATE OF SERVICE

I hereby certify that I served the foregoing **SUPPLEMENTAL COMMENTS OF CALPINE CORPORATION** on the following persons on August 28, 2013, by hand-delivering, faxing, e-mailing, or mailing (as indicated below) to each a copy thereof, and if mailed, contained in a sealed envelope, with postage paid, addressed to said attorneys at the last known address of each shown below and deposited in the post office on said day at Portland, Oregon:

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DATED this 28<sup>th</sup> day of August, 2013.

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